

A New Species of *Harpa* from the Leeward Islands of Hawaii

Harald A. Rehder

Department of Invertebrate Zoology
National Museum of Natural History
Smithsonian Institution
Washington, DC 20560 U.S.A.

ABSTRACT

Harpa goodwini, new species, is described from two localities in the Leeward Islands of Hawaii, French Frigate Shoals and Maro Reef, where it occurs in 82–228 m. This new species is most closely related to *Harpa cabritii* Fischer, 1860, once known as *H. ventricosa* Lamarek, 1816 (not Lamarek, 1801).

Key words: Gastropoda, Harpidae; *Harpa*; new species; Hawaiian Islands.

INTRODUCTION

On several occasions Mr. Donald Dan has turned over to me for study specimens of *Harpa* received by him from correspondents. One of these lots represents a striking new species from the Leeward Islands of the Hawaiian Group. I am grateful to Mr. Dan for the privilege of examining this material, and for permitting me to describe this new species.

ABBREVIATIONS FOR INSTITUTIONS

AMNH—American Museum of Natural History, New York
AMS—Australian Museum, Sydney
BM—Bernice P. Bishop Museum, Honolulu
BM(NH)—British Museum (Natural History), London
LACM—Los Angeles County Museum of Natural History, Los Angeles
MCZ—Museum of Comparative Zoology, Cambridge
MNHN—Muséum National d'Histoire Naturelle, Paris
MHNG—Muséum d'Histoire Naturelle, Geneva
NSMT—National Science Museum, Tokyo
USNM—National Museum of Natural History, Smithsonian Institution, Washington, DC

SYSTEMATICS

Family Harpidae Bronn, 1849
Genus *Harpa* Röding, 1798
Harpa goodwini, new species
Figures 1,2; Table 1.

Description: Adult shell (figs. 1,2) 60–74 mm in length, broadly oval, outline of last whorl arcuate. Protoconch conical, pale pink, consisting of $2\frac{1}{4}$ to $3\frac{1}{2}$ convex, glossy whorls. Postnuclear whorls $3\frac{1}{4}$ –4 in number, first $1\frac{1}{2}$ whorls convex, pale pink in color, showing fine spiral cords at shoulder and below that cross fine axial riblets; this sculpture increasingly covered in subsequent whorls by the upper part of the glaze that covers the ventral wall at succeeding apertures and that extends up to the sharp spines of the axial ribs where they cross the shoulder cord. These spines become increasingly prominent and accentuate the flattened channel between suture and shoulder. On the upper whorls, the axial riblets in the channel are fine cords, but on the body whorl they become broader and flatter. Body whorl with 13–15 strong ribs that are erect with the moderately acute crest slanted away from the aperture along the apical half, but more rounded and flattened on the lower half of the rib. Ribs prominent and of orange color in the subsutural channel. At the shoulder, ribs form acute, triangular spines that are orange for most of the whorl, but become white near the aperture. The intercostal spaces are, as in most species of *Harpa*, axially finely striate.

Basic color of fresh specimens is pinkish to pinkish orange, with the spire whorls appearing yellowish due to the glaze covering. Ribs on the body whorl typically crossed by a series of eight pairs of dark chestnut lines that are generally more pronounced on the last four or five ribs and situated as follows: two pairs between the spine at the upper end of each rib and $\frac{1}{6}$ of the distance down the length of each rib; another two pairs along the center of the whorl; below that a single line (occasionally absent), then another pair of lines, and at the base three pairs of lines (the last may be obscure or appear as a single line), making a total of 17 lines. Between these four groups of lines are moderately broad bands composed of a central pale pink or orange pink band between two white bands. The intercostal spaces are marked with wavy, chestnut brown, axial lines, and, occasionally, by deep orange-rose splotches in two spiral bands, one in the center of the whorl, the other just below the spinose shoulder. Aperture oval with top of outer lip meeting the parietal wall at a right angle, the outer lip evenly

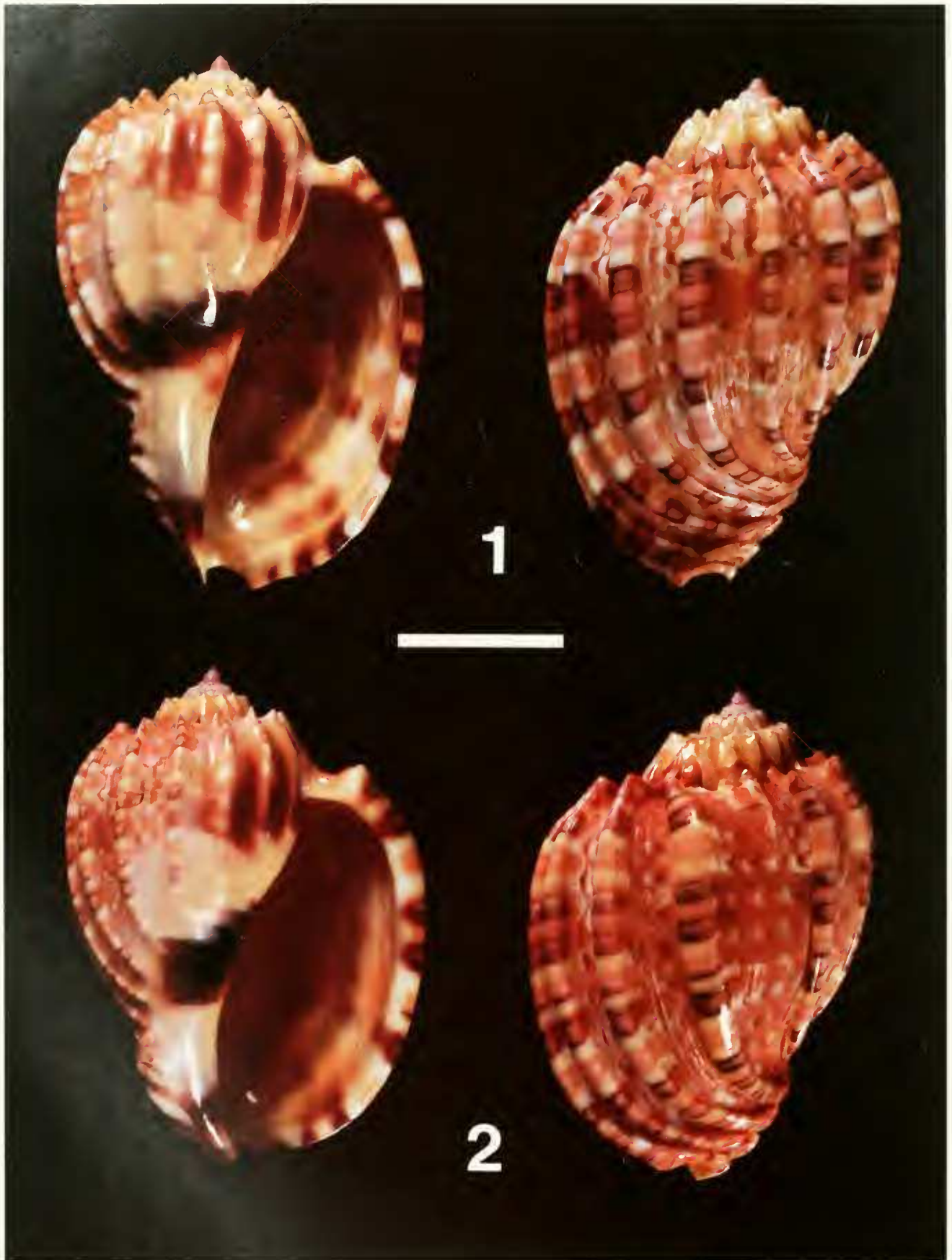


Table 1. *Harpa goodwini*, new species. Measurements of shell characters. Linear measurements in mm.

	Length	Width	No. ribs on body whorl	No. whorls	No. nuclear whorls
Holotype	63.8	45.1	15	7.00	3.33
Paratype 1	61.0	42.7	13	7.00	3.25
Paratype 2	73.4	57.3	14	6.00	2+
Paratype 3	74.8	55.2	14	6.16	2.33
Paratype 4	70.2	51.1	15	6.33	2.50
Paratype 5	70.3	52.5	15	6.25	2.50
Paratype 6	69.2	50.5	13	6.25	2.50
Paratype 7	70.4	48.1	15	6.33	2.50
Paratype 8	70.1	50.6	14	6.25	2.25
Paratype 9	66.2	44.7	15	6.12	2.12
Paratype 10	61.4	43.0	14	5.88	2.12
Paratype 11	60.4	43.7	15	6.00	2.25
Paratype 12	60.0	38.4	14	6.25	2.50
Mean	67.0	47.9	14.3	6.29	2.51
Range	60.0–74.8	38.4–57.3	13–15	5.88–7.00	2.12–3.33
SD	5.0	5.3	0.7	0.33	0.38

arcuate. Parietal wall of aperture gently convex, columella nearly straight, or slightly concave, anal fasciole strongly ridged by flattened ends of the ribs, the sinus fairly deep. Columella and parietal walls covered by a yellowish glaze, the outer lip yellow under the axial ribs, with deep chestnut lines on the ribs showing through as chestnut spots. The ventral wall has three chestnut spots: a strong, elongate central spot that slants apically into the aperture above the top of the columella; a weak, oval or roughly triangular spot between the ribs at the top of the parietal wall; and a small spot at the base of the columella.

Type locality: French Frigate Shoals, Hawaiian Islands, about 166°10'E, 23°45'N, 137 m. Taken with hermit crabs.

Material examined: Holotype, USNM 860312, Paratype 1, USNM 860314, from the type locality; Paratype 2, BM; Paratype 3, MCZ; Paratype 4, Goodwin Collection; Paratype 5, AMNH 226438; Paratype 6, BM(NH); Paratype 7, USNM 860315; Paratype 8, MHNG; Paratype 9, LACM; Paratype 10, AMS; Paratype 11, MNHN; Paratype 12, NSMT; all collected between French Frigate Shoals and Maro Reef, Hawaiian Islands, in 82–228 m.

Range: Leeward Islands, Hawaii, from French Frigate Shoals, to Maro (Dowsett) Reef.

Habitat: I am aware of only 13 specimens of this species having been collected, all from lobster traps set in depths ranging from 82 m to 228 m. All type specimens were brought into traps by hermit crabs.

Etymology: This new species is named after Daniel R. Goodwin of Honolulu, Hawaii, who collected all of the type specimens.

Comparative remarks: *Harpa goodwini* is a moderately large species characterized by its broad oval shape, its outline resembling that of *Harpa costata* (Linné, 1758) but with the outline of the last whorl more evenly arcuate, and differing by possessing an overall pinkish or orange-pink coloration when fresh, with dark horizontal stripes on the fewer, moderately broad and distant ribs. *Harpa major* Röding, 1798 differs from this new species in having a more oval shape, the whorls without the broad, flattened canal, and with the ribs fewer in number and lacking the dark horizontal lines.

This new species most closely resembles *H. cabritii* Fischer, 1860 (see Rehder, 1973:251–252; 1992:123), and has the same general arrangement of dark chestnut blotches on its ventral side. *Harpa goodwini* has, however, a relatively broader shell, with the body whorl not medially flattened but gently rounded. The axial ribs of *H. cabritii* lack the horizontal dark bands and numerous dark lines of *H. goodwini*.

LITERATURE CITED

- Rehder, H. A. 1973. The family Harpidae of the world. Indo-Pacific Mollusca 3(16):207–274.
 Rehder, H. A. 1992. A new name for *Harpa ventricosa* Lamarck, 1816 (Gastropoda: Harpidae). The Nautilus 106(3): 123–124.

Figures 1, 2. *Harpa goodwini*, new species. 1. Holotype, USNM 860312. 2. Paratype 1, USNM 860313, both from French Frigate Shoals, Hawaiian Islands, about 166°10'E, 23°45'N, 137 m. Both specimens were brought into traps by hermit crabs. Scale bar = 2.0 cm.